



USER GUIDE

Please read the following safety information carefully. The information is provided to prevent potential injury or damage.

Classification (Degree of Danger)



Failure to follow these safety warnings could lead to a serious injury or death.



Failure to follow these cautions could lead to an injury or cause loss of property.



Warning



Do not operate the product while driving.



Do not disassemble, repair, or modify the product.

This may cause fire, electric shock, there are no user servicable parts inside the device.



Do not cover or place anything on the product.

This may cause the product to overheat and cause premature failure of components.



If the unit ceases to operate, unplug the device and contact your supplier.



Use only the supplied power cable and windscreen bracket.

Do not modify the supplied power cable and/or windscreen bracket.



Do not expose the device to liquids.



Do not install the product in an area which is susceptible to moisture or dust.



Do not install product where it will obstruct your field of vision.



Do not install the device an an area which may affect the safe operation of the vehicle controls or safety equipment e.g area where Air Bags may be deployed.



The environmental temperature should not exceed the following limits $(32^{\circ}F$ to $122^{\circ}F)$, $(0^{\circ}C$ to $50^{\circ}C)$ and keep the device away from high humidity.



Caution



Do not touch the device with greasy or wet



Do not use a sharp object to operate the buttons.



Do not drop device.



Do not attach any stickers or paint on the device or memory card.

This can damage the product or lead to a product breakdown.



Do not place the device near a magnet or areas of high magnetic fields.



Do not take the SD memory card out during operation.

This can damage the product and any data on the SD memory card.



Do not place the device behind the shaded area of the windscreen as this will affect the image quality.



Replace old SD memory cards.

Prolonged usage of an old SD memory card can lead to data loss.



Use only approved SD memory cards.

Preserving Data on the SD Memory Card

Please pay attention to following information to minimize the possibility of losing recording data. The manufacturer is not responsible for missing data or defects caused by the user's mishandling.

- Protect SD Memory from any impact or misuse as this may cause data loss.
- · Prior to the SD memory card replacement, check if SD memory card is compatible with the product.
- · Properly turn off the device's power.
- · Backup important data regularly.
- Format the SD memory card 1~2 times a month.

Estimated recording time based on the SD Memory Card Capacity



Manufacturer	class 2	class 4	class 6	class 10	Note
Transcend	•	•	•	•	Supports HD and SDHC
Lexar	•	•	•	•	Supports FID and SDFIC

GPS Usage

Please pay attention to following information to properly understand the GPS system.

- If the product has not been turned on for a long time (over 3 days) or if the vehicle is in motion, it may take longer for the device to establish a GPS connection.
- · The GPS reception can be weakened by heavy rain.
- · The GPS reception can be affected when travelling through a tunnel or into an area with numerous high rise buildings.
- The GPS reception can be interrupted by athermic windshield coating, heavily tinted window glass, or electromagnetic
 waves caused by other devices installed into the vehicle.
- The GPS reception can be weakened or interrupted by close proximity to high voltage areas.



The accuracy of the time/speed is dependent on GPS reception..

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Product Features



0.3 Mega Pixel High Quality Sensor

 Uses a 0.3 mega pixel high quality image sensor to provide clear and vivid images.



Acceleration Information Retention

It saves vibration information from the frontrear and left-right of the car at the moment of an accident, extreme acceleration, breaking or turning.



Multiple Recording Modes (Continuous, Event and Manual Recording)

- It continuously records 30 frames per second at a 120° angle within the driving direction at high quality.
- It automatically records at the moment of the accident, extreme acceleration, breaking or turning by a 3 axis acceleration sensor detecting abnormal situations.



High Sense GPS Receiving (Google Map)

 It displays images with the location information, driving speed and driving route received from GPS.



Battery free by using a power input from the car

 It eliminates inconvenience of buying and replacing batteries by using the power from the car.



Overwriting

 When SD memory card gets full during recording, the oldest data is overwritten with new data.

Product Features



Easy viewing of recorded images by a designated player

 Recorded images in SD memory card can be viewed by a designated player on a computer.



Video Output

 It provides Real-time image output which can be displayed through a navigation unit or external AV device.



Parking Monitoring Mode

- It supports a parking monitoring mode that records at 4 frames per second. This allows for 1.5 times longer recording retention than normal recording mode; 30 frames per second.
- ** Parking mode is dependent on the device being powered even when the ignition is switched OFF.



Audio Input

It records driving images and audio data simultaneously by using an internal microphone.



Day/Night Recognition

 It provides a high quality image created by precise technology even in low light situations.



Disable Audio Recording Function

 The audio recording function can be disabled for protecting privacy.

Product and Accessories

Please make sure the following components are included when you unpack the product. If any of the following items are missing, contact your local dealer.



DVR-1 Recorder



Bracket



Power Cable



Micro SD Memory



Micro SD Reader (USB Adapter)



3M Double-sided tape (For attaching Bracket)



User Guide



Cable Holder



Video-Out Cable



The specifications in the manual may differ from the actual product and are subject to change without advance notification.

1. Part Name and Description

1-2 DVR-1





1	Memory Card Slot	Used to insert the Micro SD Memory card
2	Power Socket	Power input
3	Video-Out	Real-time images can be outputted to a navigation or external AV device
4	Camera Lens	Receives optical data
5	Light Sensor	Detects between daytime or nighttime in order to record the best image
6	LED	Displays the recording status
7	MIC	Built in microphone
8	(Recording / Buzzer Off) Button	Initiates manual recording or turns the buzzer off in the event recording mode



The specifications in the manual may differ from the actual product and are subject to change without advance notification.

2. Installation and Setup

2-1 Caution before installation

Parts

- Make sure all components are included before starting installation. (See Page 10: Product and Accessories)
- If you find any components are missing, contact your dealer.

Installation Preparation

Please adhere closely to the following instructions as the installation angle/position can affect the recording.

- Position the bracket in a central area of the windshield. Ensuring that the unit does not obstruct the drivers vision of the road ahead
- 2 Place the recorder on to the bracket with the camera lens facing the windscreen.
- 3 Check that the view between the recorder and windshield is not obstructed.

2. Installation and Setup

2-2 Installation of the Recorder

Check location and installation conditions of the recorder. If you have not already done so then please refer to Cautions before installation. (See Page 2: Safety Information)

Remember that a 120° angle can be recorded with the recorder installed at the top, bottom or center of the windshield.



Clean the windshield with dry fabric where the holder will be positioned.



2 Remove the protective film from the double-sided tape.



Attach the bracket to the windshield.

 Make sure that the location of the bracket is not in the driver's line of sight. Attach the bracket firmly to the windshield.

2. Installation and Setup <2-2 Installation of the Recorder>



SD Memory card preparation - Make sure the side with letters is facing upwards.



Insert the SD Memory card into the card slot of the recorder. - Make sure SD memory card is properly seated in slot.



6 Connect the power cable to the power input on the recorder.



Adjusting the angle of the camera view.

- Use the adjustment angle to ma

 Use the adjustment angle to make sure that the lens is directed centrally and in the direction of the desired view to be recorded



8 Place the recorder onto the bracket.



Arranging the power cable -Tidy the power cable using cable holders so that it is not dangling or obstructing the field of vision.

2. Installation and Setup <2-2 Installation of the Recorder>



10 Connect the other end of the power cable to the car power out.



An alarm sound will be activated if the SD Memory card is not inserted correctly.

A hardware cable is also supplied with the device, this allows the unit to be connected directly to the vehicle wiring.

Connections:

Red (with fuse Positive supply

Blue Negative or vehicle chassis.

If in doubt please consult an Auto Electrician before connecting this device to the vehicle wiring.

3. Operational Instructions

3-1 Recording Modes



Connecting Power

 A blue light flashes on the LED when the power is connected.



Starting Recording

 When the light is solid blue the device is ready for continuous recording.

(5~10 seconds after connecting power)



Manual Recording

- The user can manually start recording by pressing REC button for an emergency or a situation which needs to be recorded.



Ending Recording

-The camera creates recording files for between 10 ~ 30 seconds and ends its operation after you turn off your car.



2 Event Recording

Recording starts automatically when extreme impacts are generated (ie: at the moment of an accident, extreme acceleration, breaking, turning and by a sensor detecting an impact). The camera indicates event recording with a red light in the LED and a buzzer sound



3. Operational Instructions

3-2 Table of Product Indicators

Status	LED Status	Buzzer Status	Description
Booting	Blue (Flashing)	None	After power is connected
No SD Memory	Red (Flashing)	Twice	SD memory is not detected or inserted
Continuous Recording	Blue	None	Continuous recording is activated
Event Recording	Red (Flashing)	Once	In case of impacts generated, extreme acceleration, breaking and turning etc
Manual Recording	Red	Once	Manual recording is activated by pressing the recording button
Mute ON	-	Twice	Disables buzzer sound. Activate by holding REC/MUTE button for 3 seconds
Mute OFF	-	Once	When in Mute "on" mode re-enables the buzzer sound by holding REC/MUTE button for 3 seconds
GPS Receiving	-	Twice	Indicates completion of the GPS connection
Parking mode	Blue & Red (Flashes continue)	None	Automatically switches to a parking mode in case any movement events are not detected for 3 minutes**

^{**} Parking mode is dependent on the device being powered constantly, even when the ignition is switched OFF.

3. Operational Instructions

3-3 Removing the SD Memory Card

Please use the following steps to remove the SD Memory Card. Failure to do so may cause permanent damage to the data.

- Turn off your car and remove the power cable from the unit.
- Wait until the LED on the body turns off (The LED will turn off slowly).
- o lt may take 5~10 seconds.
 - Gently push SD memory card inward and it will trigger a release.
- 4 Remove the SD memory card.

4-1 Software Installation

The user can playback recorded video through the video player with a compatible computer. Windows XP, Vista and 7.



- Connect the SD memory card to a computer.
 - Combine the SD memory card with USB gender and connect the USB gender to a computer.



Double-click snooper.exe on the SD memory card or download the latest program from the download menu at www.snooper.eo.c.uk



Designate an installation folder for the software and then click the 'install' button.



After the installation is completed, click the 'Close' button.



- · Make sure insert you the correct side of SD memory card to the USB gender.
- The Classic View can now be executed from the installation location or the desktop.

4-2 Operating the Classic Viewer







- Running the software
 Double-click the Snooper
 icon from the desktop or.
 (File name : Snooper
 Viewer.exe)
- The player software screen will then appear.
- Opening a recording video file
 Click the USB button and
 select a saved recording on SD
 memory card. Select the time
 folders within the "xxxx_EVENT"
 or "xxxx_REC" folders.

4. Classic Viewer Software <4-2. Operating the Classic Viewer>



✓ Video Display

-The first video from the selected folder will be displayed on the screen.



Playing the Video
- Press to begin the video.

4. Classic Viewer Software <4-2. Operating the Classic Viewer>





Google Map Control

Control	Description
•	Street View
+	Use to enlarge, reduce the map size
Map	General map View
Satellite	Satellite map view

File List
- Press to display the file list. Select any file
within the list to begin playing. (The files are
created in intervals of 30 seconds.)

7 Trin Tracking using GPS & Google Map
- Press GPS button and Google map will show
the location of the vehicle. The GPS location
was saved together with recorded images. (Only
models with a GPS module have this function.)



- To use the map function you should be connected to internet and using Internet Explorer 7.0 version or above.
- The map may not be shown if the GPS information was interrupted during driving.

4-3 Player Controls

Button	Function	Description
()	Rotate Counter-clockwise	Rotates the image 90 degrees counter-clockwise
	Rotate clockwise	Rotates the image 90 degrees clockwise
	Color Adjustment	Adjusts the color of the image
▭	Printer	Prints the image
Ī	Capture	Captures the image on screen in either PNG or JPG format
	Google map	Links the recorded data with Google maps
Ê	File List	Shows the list of the recorded data
₽	DVR-1 Setup	Access and configures the DVR-1 recorder
~	Open	Opens the desired folder

4-4 Playback Buttons

Button	Function	Description
41	1st Frame	Goes to the first frame of the video
	Stop	Stops the video
-	Play	Plays the video
II	Pause	Pauses the video
ы	Step Forward 1 Frame	Forward frame by frame playback
I	Last Frame	Goes to the last frame of the video

4-5 Configuration Menu

The user can change the settings for the recorder in the configuration menu. Press this button and the configuration window will open.



Drive: Select the drive location of the SD memory card. **Video Quality**: Set the recording quality for the device.

Video Frame Rate: Set the recording frame rate for the device. **Sound Volume**: Set the volume for audio recording.

Shock Sensitivity: Set sensitivity of the G-sensor.

Speed Unit: Select speed unit type.(MPH or KM/H)

Parking Watch: Enables the parking watch mode.

Set Time: Manually set the time of the device.

Get Current Time: Automatically sets the time of the device to the local system time (PC).

Time Zone: Select the desired time zone.

Daylight Saving Time: Manually set the start and end date of the daylight savings time. Enabling daylight savings will set the clock 1 hour ahead.

Language: Select the desired language.



- If parking watch is enabled on the unit and no events are detected for a 3 minute period the device will
 automatically enter into the parking watch mode and record at 4 frames per second. The detection of any
 event will trigger the unit to record at the standard recording rate of 30 frames per second.
- Any changes to the settings on SD memory card are automatically applied to the device after the SD
 memory is inserted into the unit and the unit is powered on.

4-6 SD Memory Card Folder Details

Folder Name	Description
"[Model Name]_EVENT"	This folder holds the data for the various event recordings. Data format - EVS_"Time": Sensor Recording Files - EVK_"Time": Manual Recording Files
"[Model Name]_REC"	This folder holds the data for the continuous recording. Data format - REC_"Time": Continuous Recording Files
"setting"	This folder holds the configuration details of the device. Configuration File List - setDST.dat : Daylight Saving Time - setFarme.dat : Frame rate - setGMT.dat : Time zone - setquality.dat : Video Quality - setsensitivity.dat : Greensor sensitivity - setsensitivity.dat : Greensor sensitivity - setsound.dat : Audio Volume - setsound.dat : Audio Volume - setspound.dat : Date/Time
"UPDATE"	This folder is used only when a firmware upgrade is available.

4-7 Firmware Upgrade

- Connect SD memory card to a computer.
- Create a folder named "Update" on SD memory card.
 - Copy the firmware(file name: "[Model Name]"_Date.BIN) into the "UPDATE" folder.
 - (File name example: B2000_201112.BIN)
 - Connect SD memory card to the unit body and power on.
 - The upgrade will be completed as indicated by LED color changing; blue(blink) \rightarrow red \rightarrow violet \rightarrow blue(blink) and single buzzer sound confirms completion.
 - The SD memory card will automatically be formatted after the firmware has been upgraded.



- Do NOT power off or remove SD memory card during the firmware upgrade.
 This may cause a permanent system malfunction.
- When formatting the SD memory card from a PC, the file system format on the SD memory card must be set as FAT16 or FAT32. NTFS or other file systems are not supported.
- If a formatted SD memory card is detected, the device will automatically create the necessary recording folders.

5. Product Specification and Certification

5-1 Product Specification

Fea	iture	DVR-1	
	Sensor	300K pixel	
Camera	Field of View	120°	
	Photo Sensor	Yes	
	Resolution	640 x 480 (VGA)	
	Frame	30 ips (640 x 480)	
Dosordina	Mode	Continuous, Event, Emergency	
Recording	Format	MPEG-4	
	Audio	Toggle (ON/OFF)	
	Storage Type	Micro SD Memory Card (2GB ~ 32GB)	
	Shock Sensor	3-Axis Acceleration	
Features	GPS	Yes	
	Video Out	Yes	
h 4'	Power	DC 12V~24V, 100mA	
Misc	O/S	Embedded Linux	



- Firmware updates are available when required and for performance enhancements.
 These firmware update files can be downloaded from www.snooperneo.co.uk
- The specification of the product is subject to be change for performance enhancements without advance notification.

5. Product Specification and Certification

5-2 Certificates



• **CE** : Industrial Safety, Europe



• FCC : Federal Communications Commission, U.S



RoHS: Restriction of Hazardous Substances



• **ISO9001**: International Organization for Standardization

6. FAQ: Frequently Asked Questions

If your product does not work properly, please check the followings points before contacting your nearest service center.

Symptoms	Solution	
Data is not stored properly onto the SD memory card.	Remove and reinsert the SD memory card.	
The device does not recognize the memory card.	Then try formatting SD memory card.Then try replacing the old SD memory card to a new one.	
What happens when the SD memory card is full?	 The device will overwrite the oldest data with the new data in chronological order. 	
Poor quality images	 Check if the protective film on the lens of the recorder has been removed. Check if any substance is stuck on the lens. Check if any substance (including sun tint film) is stuck on the windshield. 	
The device does not turn on.	 Check that the power is properly connected and secure. Check if the current power cable is the one provided in the package. Check the fuse in the power cable or cigar lighter plug. 	





